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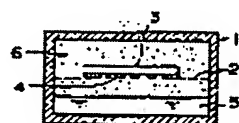
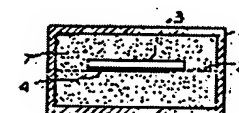
(54) RESIST PATTERN FORMING, RESIST ELIMINATING AND SUBSTRATE WASHING METHODS

(57)Abstract:

PURPOSE: To simplify by a process by dipping a substrate for which exposing treatment is finished, or a substrate on which resist is adhered, or a substrate on which foreign matter sticks, in supercritical flow fluid for a specified period, and performing developing or resist eliminating or substrate washing.

CONSTITUTION: PMMA is spread on the surface of a disc type silicon wafer, which is exposed by an electron beam lithography equipment. At the time of developing, a substrate 3 for which exposing is finished is mounted on a mesh type retainer in a high pressure vessel 1, and high pressure carbon dioxide is introduced in the state where the high pressure vessel is kept at the critical temperature or below. The carbon dioxide exists in the state where a liquid layer part 5 and a gas layer part (vapor part) 6 are separated. By a temperature controlling means, the temperature of the high pressure vessel is raised at 46° C, and then the carbon dioxide in the high pressure vessel 1 turns to supercritical flow 7.

This state is kept for 30minutes, and the temperature of the high pressure vessel is reduced at the critical temperature or below. Thereby the resist 4 of the substrate 3 is developed, and an uneven pattern along an exposed pattern can be formed. In such a manner, the destruction of the substrate can be prevented, and waste liquid processing is extremely simplified.



LEGAL STATUS

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